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Dr. Frederick Stone Division of General Medical Science National Institutes of Health Bethesda 14, Maryland

Dear Fred:

Partly with the impetus of the work we have undertaken in exchiology with NASA support we have been becoming keenly aware of the unmet opportunities in medical instrumentation. Dr. Elliott Levinthal has been working closely with me on our exchiology project and is especially competent and interested in the development of this area.

We are now facing the need and possibility of some enlargement of our instrumentation engineering program for exobiology. However, I hesitate to encourage much further expansion of this activity except in the context of a more generally useful application to the research problems of the medical school. Many very specific useful connections have become apparent. For example, there are some unexpected parallels in the engineering solution to the problem of the selective detection of microorganisms seen through a microscope and the efficient utilization of fluorescopy with the assistance of image intensifier techniques. In both instances a sophisticated understanding of video electronics and information processing is required. Many other points of common interest between the exobiology program and other activities in our department and elsewhere throughout the medical school are beginning to emerge. We were therefore particularly interested to hear of the additional support for medical instrumentation that was incorporated into the recent NIM appropriation. I believe that it would be especially appropriate if support for our expanded activities in this field could be undertaken jointly by NASA and the NIH. We are far from the stage of explicit proposals and I gather that no very definite program has yet been formulated In the NIH to handle these new directions. However, we would greatly appreciate being well informed as to your program developments.

Dr. Levinthal will be in Washington in ten days or so and I would regard it as a very helpful courtesy if he could obtain any additional information or have some opportunity for the most tentative discussion with an appropriate member of your staff.

With best regards.

Yours sincerely,

Joshua Lederberg Professor of Genetics

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